Beta Thalassemia

Definition: Thalassemia is inherited disorders characterized reduced or absent amounts of hemoglobin, the oxygen-carrying protein inside the red blood cells.

Two Basic Groups of Thalassemia Disorder

- Alpha Thalassemia

- Beta Thalassemia: A person with this disorder has two mutated genes

There are 3 types of Beta Thalassemia

- *Thalassemia Minor*

- *Thalassemia Intermediate*.

- *Thalassemia Major* or *Cooley's Anemia*

Thalassemias

Beta Thalasemia

- It is caused by a change in the gene for the **beta** globin component of hemoglobin

- It can cause variable anemia that can range from moderate to severe.

- Beta thalassemia trait is seen most commonly in people with the following ancestry: Mediterranean (including North African, and particularly Italian and Greek), Middle Eastern, Indian, African, Chinese, and Southeast Asian (including Vietnamese, Laotian, Thai, Singaporean, Filipino, Cambodian, Malaysian, Burmese, and Indonesian

Symptoms of Beta Thalassemia

- It is characterize by severe anemia that can begin months after birth
- Paleness
- Delays in growth and development
- Bone marrow expansion.
- Untreated Beta Thalassemia major can lead to child death due to heart failure.

Alpha and Beta Thalassemias

- The thalassemias are, therefore, considered *quantitative* hemoglobin diseases.

- Because all types of **thalassemia** are caused by changes in either the alpha- or **beta**-globin gene. These changes cause little or no globin to be produced.

Treatment of Beta Thalassemia

- Regular blood transfusion helps prevent severe anemia and allows for more normal growth and development

- There are various medications that target the production of red blood cells (i.e. erythropoeitin)

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